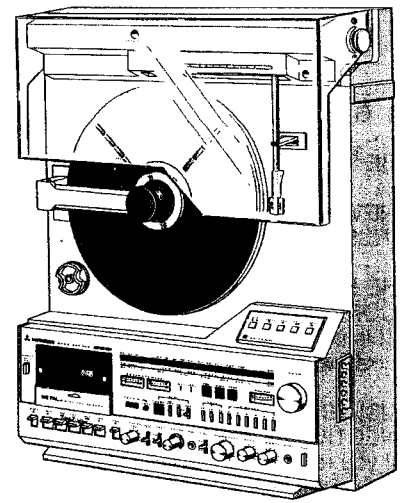
MITSUBISHI

VERTICAL MUSIC CENTER

MC-8000

INSTRUCTION BOOK



Congratulations on your choice of the Mitsubishi Vertical Music Center Model MC-8000.
For the best performance results, please read this instruction book carefully before use.

WARNING – TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

For future reference a space has been provided below for the recording the serial number of your vertical music center.

Serial-N°

Wir beglückwünschen Sie zum Kauf des Mitsubishi Vertical-Music Centers MC-8000. Bitte lesen Sie diese Bedienungsanleitung vor der Benutzung des Gerätes sorgfältig durch, damit Sie in den Genuß seiner vollen Leistung kommen.

VORSICHT: WEGEN DER GEFAHR VON FEUER ODER ELEKTRISCHEN SCHLÄGEN IST DAS GERÄT VOR REGEN UND FEUCHTIGKEIT ZU SCHÜTZEN.

Tragen Sie bitte die Seriennummer Ihres Gerätes in das freigelassene Kästchen unten ein, damit Sie später leicht darauf zurückgreifen können.

Seriennummer

Vous êtes devenu l'heureux propriétaire du "Vertical-Music-Center" Mitsubishi MC-8000 et nous vous en félicitons. Veuillez lire attentivement cette notice d'utilisation, avant d'emploi de cet ensemble stéréophonique de haute qualité, pour que vous puissiez jouir pleinement de ses performances.

ATTENTION: EN RAISON DU DANGER D'INCENDIE OU DE DÉCHARGES ÉLECTRIQUES, IL FAUT PROTÉGER L'APPAREIL CONTRE LA PLUIE ET L'HUMIDITÉ.

Inscrivez la numéro de série de l'ensemble dans la case libre ci-dessous, de manière à ne pas l'oublier, par la suite.

Numéro de série

Vi gratulerar dig till valet av Mitsubishi Vertical Music Center MC-8000. Studera denna bruksanvisning noga innan apparaten tas i bruk, så att du helt kan utnyttja alla dess finesser.

VARNING: FÖR ATT UNDVIKA BRANDFARA ELLER ELEKTRISKA ÖVERSLAG SKALL APPARATEN SKYDDAS FÖR FUKT OCH VÄTA.

Notera gärna apparatens tillverkningsnummer i den fria rutan, så har du den lätt hands vid framtida behov.

Tillverkningsnr.

SPECIFICATIONS

ENGLISH

TUNER SECTION

FM Section	
Tuning range	87,5 MHz ~ 108 MHz
Usable sensitivity	0,9µV (75 ohms)
Total harmonic distorsion	0,2 %
Image response ratio	45 dB
Signal to noise ratio	70 dB
Stereo separation	35 dB
Antenna impedance	300 ohms unbalanced and 75 ohms balanced
MW Section	
Tuning range	525 kHz ~ 1,605 kHz
Sensitivity	600µV/m (S/N: 26 dB)
Image response ratio	40 dB
Antenna	Ferrite bar antenna

AMPLIFIER SECTION

Power output (1 kHz)		2 x 25 watts (4 ohms)
Total harmonic distorsion (1 kHz)		0,5 % (rated power output)
Input sensitivity/impedance		MIC 1.5mV/10k ohms
Frequency response		30 Hz ~ 20 kHz (± 1.5 dB)
Hum and noise		60 dB (DIN)
Tone Controls	BASS	± 8 dB (100 Hz)
	TREBLE	± 8 dB (10 kHz)

TURNTABLE SECTION

Type	Electronically controlled fully automatic operation
Drive mechanism	DC servo motor Belt drive
Platter	30 cm (Aluminium die-cast)
Platter speed	33-1/3, 45 r.p.m.
Wow and flatter	0,06 % (W.R.M.S)
Signal to noise ratio	55 dB (IEC-B), 65 dB (DIN-B)
Tonearm	Linear tracking, straight pipe type, static balanced
Cartridge	MAG-47
Stylus	Diamond
Stylus force	2 gr

CASSETTE DECK SECTION

Type	4 tracks, 2 channel
Tape speed	4,75 cm/sec.
Recording system	AC bias (85 kHz)
Erasing system	AC erasing (85 kHz)
Playback equalization	
Normal	3180 µsec./120 µsec.
Special and Metal	3180 µsec./70 µsec.
Frequency response	
Normal	30 Hz ~ 13,000 Hz
Special and Metal	30 Hz ~ 16,000 Hz
Signal to noise ratio	
DOLBY NR out	45 dB (DIN)
DOLBY NR in	52 dB (DIN)
Wow and flutter	0,07 % (W.R.M.S)
Channel separation	25 dB
Crosstalk	50 dB
Motor	DC servo motor

GENERAL

Power (Mains) consumption	170 watts (IEC nominal)
Dimensions (W x H x D)	460 x 587 x 245 (mm) (18-1/8 x 23-3/4 x 9-5/8")
Weight	18.5 kg (40,8 lbs)
Accessories	T shaped FM antenna, AM Lead Antenna, Screwdrivers Preset Adjustment, Black Sheet 17,30 cm (For a transparent or a colored record) Wrench

"DOLBY" and the Double D symbol "DD" are trademarks of Dolby Laboratories.
Design and specifications are subject without notice for improvement.

TECHNISCHE DATEN

DEUTSCH

TUNER TEIL

UKW	
Frequenzgang	87,5 MHz – 108 MHz
nutbare Empfindlichkeit	0,9 µV (75 Ohm)
Klirrfaktor	0,2 %
Spiegelfreqenzunterdrückung	45 dB
Rauschabstand	70 dB
Stereo-Übersprechdämpfung	35 dB
Antenne-Impedanz	300 Ohm abgeglichen unf 75 Ohm nicht abgeglichen
MW-Teil	
Frequenzgang	525 kHz – 1605 kHz
Empfindlichkeit	600µV/m (Rauschabstand: 26 dB)
Spiegelfrequenzunterdrückung	40 dB
Antenne	Ferritestabantenne
Ausgangsleistung (1 kHz, bei gleichzeitigem Betrieb beider Kanäle an 4 Ohm)	2 x 25 Watt
Rauschabstand (von AUX, 1 kHz)	0,5 % (bei Ausgangsnennleistung)
Eingangsempfindlichkeit/Impedanz	MIC 1,5 mV/10 kOhm
Frequenzgang	30 Hz – 20 kHz (± 1,5 dB)
Rumpeln und Rauschen	60 dB (DIN)
Klangregler Bass	± 8 dB (100 Hz)
Höhen	± 8 dB (10 kHz)

PLATTENSPIELER

Typ	elektronisch gesteuerter vollautomatischer Betrieb
Motorteil	
Antrieb	Riemenantrieb
Motor	Gleichspannungs-Servomotor
Plattenteller	30 cm Ø (Aluminiumguß)
Drehzahlen	33 1/3, 45 U/min
Gleichlaufschwankungen	0,06 % (W.R.M.S)
Rauschabstand	55 dB (IEC-B) 65 dB (DIN-B)
Tonabnehmersystem	
Typ	Lineartracking, gerader Tonarm, statisch ausbalanciert
System	MAG-47
Abtastnadel	Diamant
empfohlene Auflagekraft	2 Gramm

CASSETENDECK

Anzahl der Spuren	4 Spuren, 2 Kanäle
Bandgeschwindigkeit	4,75 cm/Sekunde
Aufnahmesystem	Wechselstrom-Vormagnetisierung (85 kHz)
Löschsystem	Wechselspannungslöschung (85 kHz)
Wiedergabeentzerrung	
Normal	3180 µsec./120 µsec.
Spezial und Metall	3180 µsec./70 µsec.
Frequenzgang	
Normal	30 Hz – 13 000 Hz
Spezial und Metall	30 Hz – 16 000 Hz
Rauschabstand	
DOLBY NR aus	45 dB (DIN)
DOLBY NR ein	52 dB (DIN)
Gleichlaufschwankungen	0,07 % (W.R.M.S.)
Kanaltrennung	25 dB
Übersprechdämpfung	50 dB
Motor	Gleichspannungs-Servomotor

ALLGEMEINES

Leistungsaufnahme	170 Watt (IEC nominal)
Abmessungen (Breite x Höhe x Tiefe)	460 x 587 x 245 mm
Gewicht	18,5 kg
Zubehör	T-förmige UKW-Antenne, MW-Bandantenne, Schraubenzieher, schwarze Plattentellerabdeckung 17 und 30 cm, (für transparente oder farbige Platten), Schraubenschlüssel

Die Bezeichnung „DOLBY" und das Zeichen des doppel D sind eingetragene Warenzeichen der DOLBY Laboratories.
Änderungen, die dem technischen Fortschritt dienen, werden ohne vorherige Ankündigung vorgenommen.

CARACTERISTIQUES TECHNIQUES

FRANÇAIS

TUNER

MF	
Gamme de fréquence	87,5 MHz ~ 108 MHz
Sensibilité utile	0,9 µV (75 Ohms)
Facteur de distorsion	0,2 %
Atténuation de la fréquence image	45 dB
Rapport signal/bruit	70 dB
Atténuation de la diaphonie	35 dB
Impédance d'antenne	300 ohms avec compensation et 75 ohms sans compensation
Petites ondes	
Famme de frèquence	525 kHz ~ 1,605 kHz
Sensibilité	600 µV/m (Rapport signal/bruit : 26 dB)
Atténuation de la fréquence image	40 dB
Antenne	ferrit
Puissance de sortie	
(1 kHz lors du fonctionnement simultané des deux canaux sur 4 ohms)	2 x 25 W
Rapport signal/bruit (1 kHz à AUX)	0,5 % (puissance nominale de l'antenne)
Sensibilité à l'entrée/impédance	MIC 1,5 mV/10 kohms
Bande passante	30 Hz – 20 kHz (± 1,5 dB)
Filtre de souffle	60 dB (DIN)
Régulateur des sons aigüs	
basses	±8 dB (100 Hz)
aigüs	± 8 dB (10 kHz)

PLATINE TOURNE-DISQUE

Type	entièrement automatique à commande électronique
Moteur	
entraînement avec transmission à courroie	
Moteur	servo-moteur à courant continu
Plateau	30 cm Ø (fonte d'aluminium)
Vitesses	33 1/3, 45 t/mn
Fulctuations du synchronisme	0,06 % (W.R.M.S)
Rapport signal/bruit	55 dB (IEC-B) 65 dB (DIN-B)
Système à tête de pick up	
type à piste linéaire	tube droit, à contrepoids
Cassette	MAG-47
Aiguille	Diamant
Force d'appui recommandée	2 grammes

PLATINE À CASSETTES

Type	4 pistes, 2 canaux
Vitesse de la bande	4,75 cm/seconde
Système d'enregistrement à prétension	alternative (85 kHz)
Correction de la retransmission	
normale	3180 µsec./120 µsec
spéciale et métal	3180 µsec/70 µsec
Bande passante	
normale	30 Hz – 13 000 Hz
spéciale et métal	30 Hz – 16 000 Hz
Rapport signal/bruit	
Dolby NR arrêt	45 dB (DIN)
Dolby NR marche	52 dB (DIN)
Fluctuations du synchronisme	0,07 % (W.R.M.S)
Séparation des canaux	25 dB
Atténuation de diaphonie	50 dB
Servo-moteur	à courant continu

GÉNÉRALITÉS

Consommation de courant du secteur	170 W (IEC nominal)
Dimensions (largeur x hauteur x profondeur)	460 x 587 x 245 mm
Poids	18,5 kg
Accessoires:	antenne FM en T, antenne à bande passant PO; tournevis, cadran noir 17 x 30 cm (pour plateau transparents ou de couleur), clés de boulon.

La mention «DOLBY» et le symbole «double D» DD sont les marques de fabrique des laboratoires DOLBY.

Sous réserve de modifications au service du progrès technique sans advertissement préalable.

fig. 1

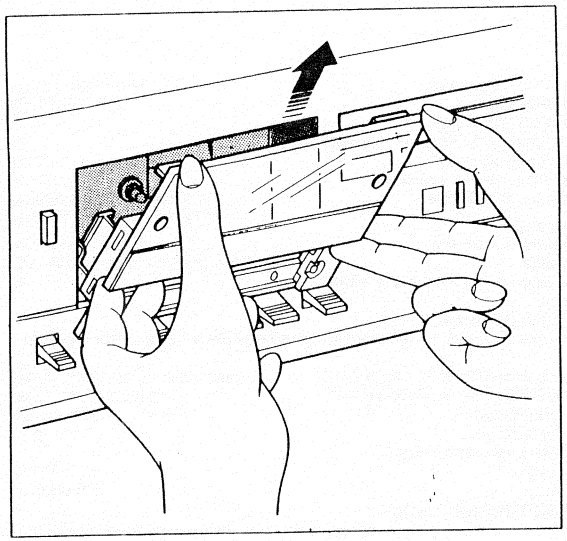


fig. 2

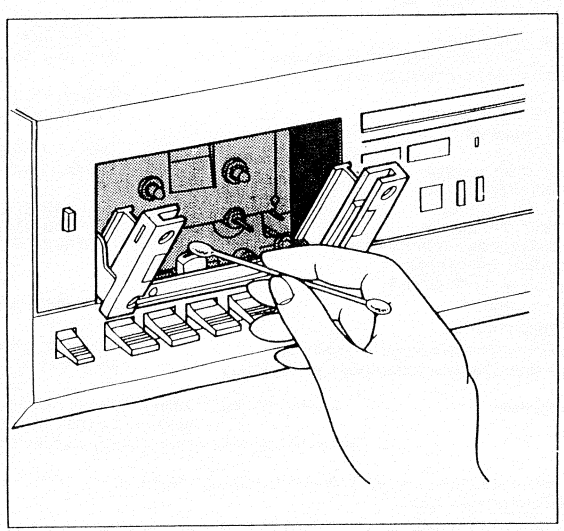


fig. 3 (FRONT PANEL)

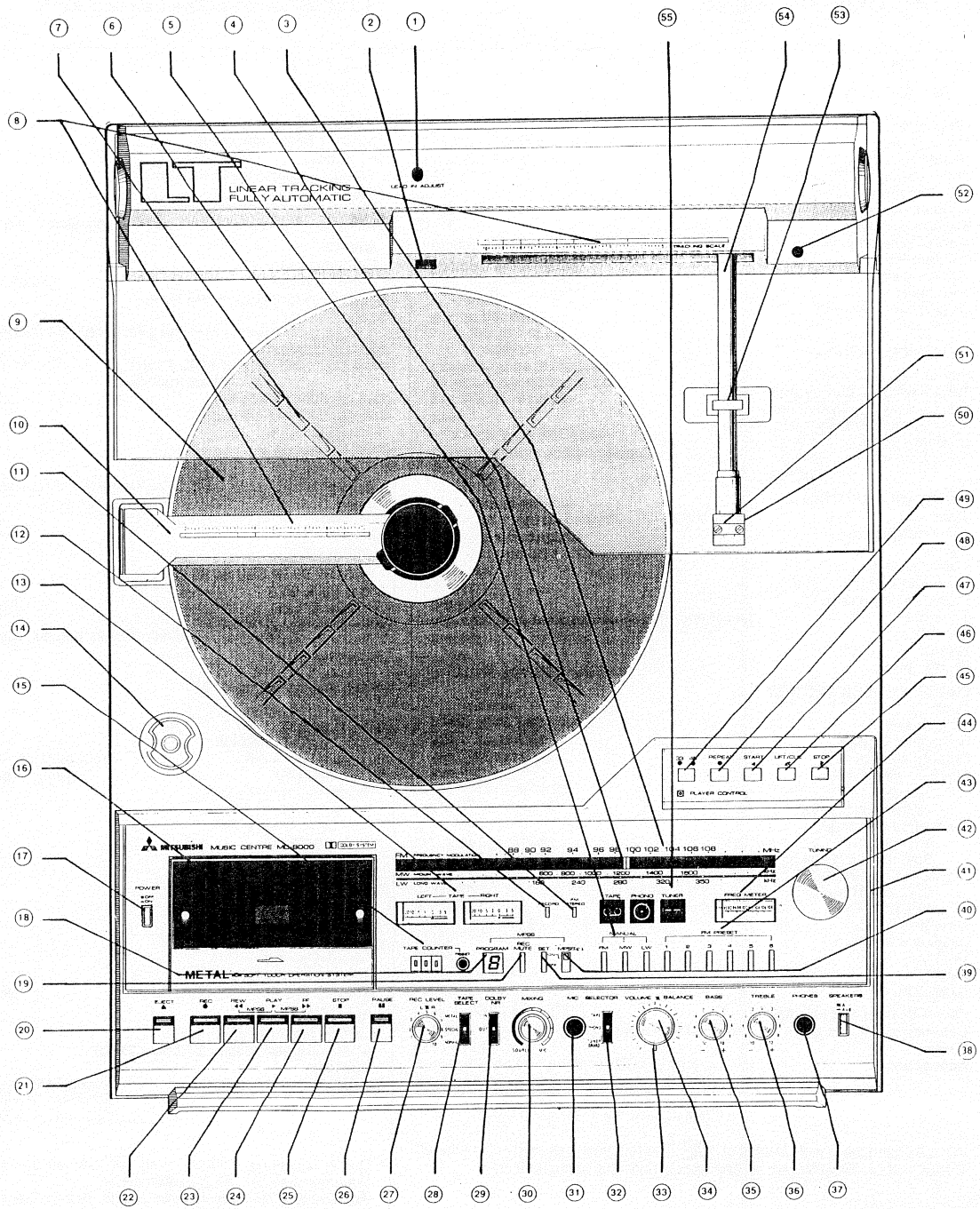
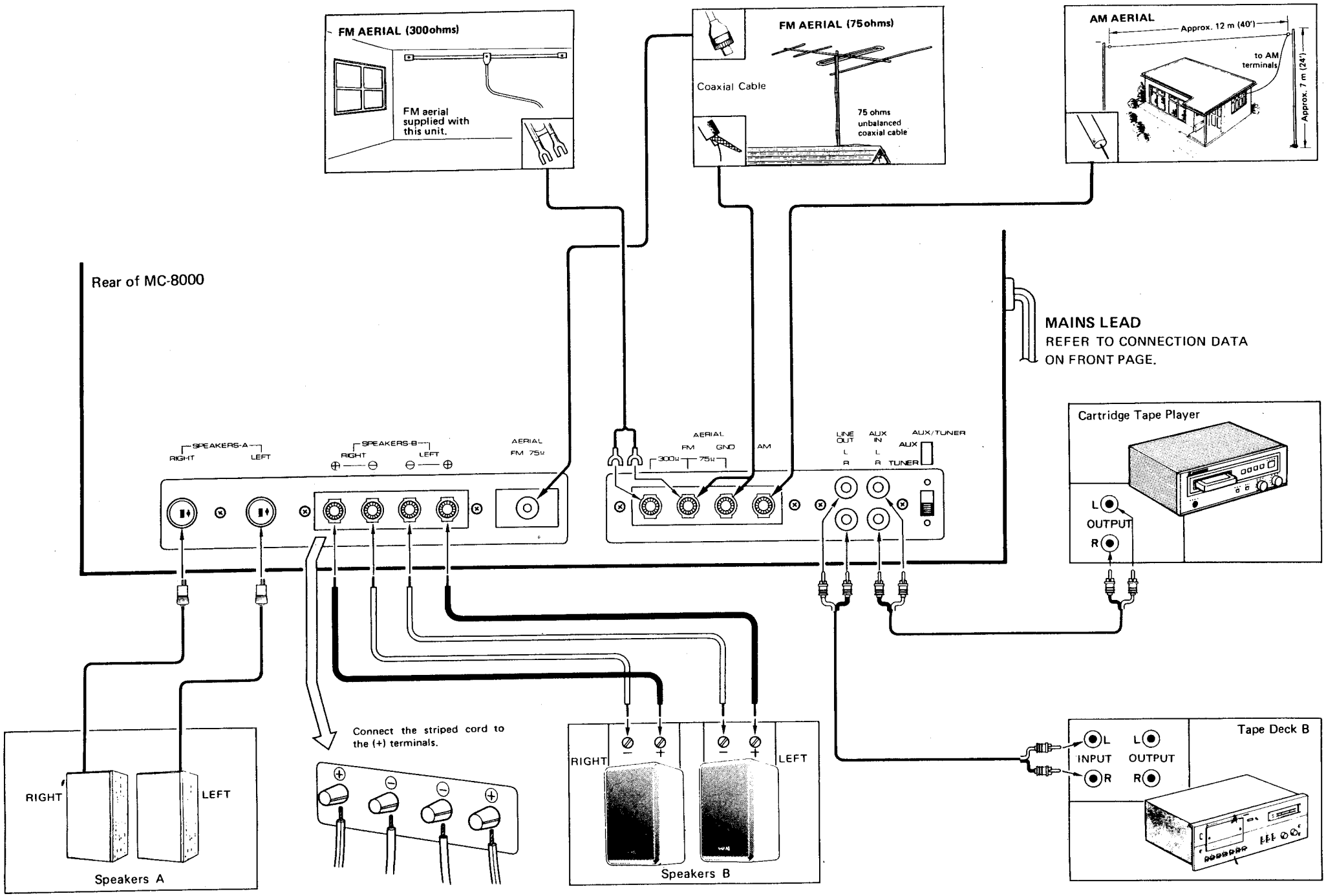


fig. 4 (CONNECTIONS)



PRECAUTIONS

ENGLISH

1. GENERAL

BE SURE TO USE YOUR A.C. POWER SOURCE.

NEVER REMOVE THE REAR COVER AND TOUCH THE INSIDE OF THIS UNIT.

BE SURE TO TURN OFF THE POWER BEFORE MAKING CONNECTIONS
This is to prevent damage to the speakers from the popping noise which occurs when plugging and unplugging cords.

USE EXPTREME CARE IN MAKING THE CORRECT CONNECTIONS.
If you reverse the R (right) and L (left) leads, you will reverse the stereo locations of the R and L channels.

LOCATION
Avoid placement in direct sunlight, near air conditioners etc.

WHEN THE SET IS NOT TO BE USED FOR LONG HOURS, BE SURE TO DISCONNECT THE POWER CORD FROM THE AC OUTLET.

2. OPERATIONS (TURNTABLE)

PLACE ON THE LEVEL AND RIGID SURFACE
Placement on an inclined surface will disturb the accurate motion of the tonearm and the stylus will not drop onto the disc record at the correct position. Howling may occur when vibrations of the speakers are transmitted to this unit. Be sure to place this unit on the level and regid surface and avoid placing where the direct vibrations of the speakers are received.

USE THE SUPPLIED DUST COVER WHEN YOU ARE NOT USING THE TURNTABLE, OR WHEN DUST IS LIABLE TO GET INSIDE. THIS TURNTABLE CAN BE OPERATED IN THE CONDITION OF CLOSING THE DUST COVER.

NEVER TOUCH THE TURNTABLE WHILE IT IS ROTATING.
Otherwise, it will apply excessive load to the drive section, and will become the cause of damaging the motor.

DO NOT PILE UP RECORD DISCS ON THE PLATTER AND DO NOT USE A WARPED RECORD DISC.
It will cause stylus jumping and sound distorsion, leading to damaging the stylus and cartridge.

TO PLAY A 25 CM RECORD DISC, SPEACIAL OPERATIONS ARE NEEDED. FOR FURTHER DETAILS, REFER TO "OPERATIONS (TURNTABLE)".

3. CLEANING OF TURNTABLE

If you play dirty or dusty records, the stylus will wear down rapidly and the record grooves will be damaged. When the record is fouled, wipe off dirt along the groove of the record with a damped gauze, which is forcefully squeezed after being damped with water. After evaporation of water, play the record. Further, dust deposited on the surface of the platter mat will also be transferred to the record disc surface. So it is also important to keep the platter mat constantly clean.

HANDLE THE STYLUS WITH CARE.
If dust should accumulate on the stylus tip, sound quality will deteriorate. Remove the dust with a soft brush. Be sure to use brush from the inside of the stylus toward outside. You will injure the stylus tip if you touch it with your fingers.

4. CLEANING OF AMPLIFIER

Wipe the panel with a soft cloth when it becomes dusty. If it should get really dirty, dampen a soft cloth in a weak solution of mild soap and water, wring it out dry and wipe off. When finished, dry completely with a soft dry cloth. Any volatile materials such as alcohol, thinner, benzine, insecticides, etc., may remove the paint or damage the luster and should not be used.

5. CLEANING OF TAPE DECK

① CLEANING OF HEADS

Deposit of dust and dirt will cause poor contact of the heads and tape and will lead to:

- Deteriorating tone quality.
- Dropping tone quality.
- Causing failure to record sounds.
- Jumping of sounds (sounds disappear momentarily).
- Causing failure to erase previously recorded sounds.

Although the heads should be cleaned at least once in every 10 hours of use, to obtain best recording and playback performances, it is recommended that be cleaned every time the deck is used.

CLEANING MATERIALS
A cleaning rod, or soft cloth such as gauze and pure alcohol.

HOW TO CLEAN HEADS

1 Depress the EJECT button to open the cassette holder.
2 Remove the cassette holder cover as shown.

(Please see fig. 1)

3 Wipe such tape-contact sections as the heads, pinch rollers and capstan. (Please see fig. 2)
4 Restore the outside cover to its former condition.

- Do not insert the cassette until the alcohol has completely evaporated.
- Another cleaning method is to clean by utilizing the travelling motion of the cleaning tape.
  In this case, the whole job is finished by having the tape run once.

② DEMAGNETIZING OF HEADS

This head can become magnetized after long hours use. This can cause excessive tape hiss and a loss of high frequencies. The heads should be demagnetized periodically at every about 30 hours of playing or recording.

1 Prepare a commercially available head-demagnetizer according to the instructions.
2 Turn off the power switch.
3 Depress the EJECT button and remove the cassette holder cover.
4 Turn on the power to the head demagnetizer and bring the tip of the head-demagnetizer close to the heads and capstan, and slowly move it up and down four or five times.
5 Slowly remove the head demagnetizer from the heads to a distance of more than 30 cm (12") and switch the power off.
6 Attach the cassette holder over again.
NOTE: This unit requires no lubrication.
Lubrication will become the cause of malfunctions.

6. CLEANING OF CABINET

When dust and dirt, etc. have deposited on the surface, wipe them off using a soft, dry cloth. Do not let such volatile agents as alcohol, thinner, benzine, or insecticides deposit on the surface as it may lead to damaging the surface, or soiling it.

"DOLBY" and the Double D-symbol " DD "are trademarks of Dolby Laboratories.
Noise reduction system manufactured under license from Dolby Laboratories.

FRONT PANEL FUNCTIONS

(Please see fig. 3)

① **LEAD-IN POSITION ADJUSTMENT SCREW**
For details, refer to P. 9.

② **LIGHT EMITTER**
Emits light to enable automatic sensing of record diameters.

③ **DIAL SCALE**
The upper scale is for FM broadcasts, middle for MW and lower for LW.

④ **DIAL POINTER**
Indicates the receiving frequency during manual station selection. When proper tuning to the desired broadcasting station has been received, the center indicator that has lighted up will glow with increased intensity.

⑤ **MANUAL (Manual Buttons)**
Depressed when selecting stations with the TUNING knob. When this button is depressed, station-selecting functions with the preset buttons will be released.
To listen to FM broadcasts, depress the FM button, and to listen to MW or LW broadcasts, depress the MW or LW button, respectively.

⑥ **DUST COVER**

⑦ **PRISM**
Catches the light emitted from the reflector and transmits the disc diameter data to the logic circuit.

⑧ **DISC GAUGES**
Disc play can be started at the desired portion from the middle of the disc, by reading the disc clamper's gauge that corresponds to the particular location on the disc first, and then by lowering the stylus at the point where gauge of the panel on the upper side of the turntable agrees with the mark (white line) on the top of the tonearm.

⑨ **PLATTER/PLATTER MAT**

⑩ **DISC CLAMPER**
Has the additional function of preventing undesirable vibrations of disc.

⑪ **FM STEREO (FM Stereo Indicator)**
Lights up to indicate reception of FM stereo broadcasts. However, will not light up even during such reception, if the radio signals are too weak.

⑫ **RECORD (Recording Indicator)**
Lights in red to indicate recording.

⑬ **LEVEL METERS**
These meters indicate the input signal levels in recording and the recorded signal levels in playback.

⑭ **45 ADAPTOR**

⑮ **TAPE COUNTER (Tape Counter/Reset Button)**
It can be conveniently used as a reference in program cueing, by depressing this button prior to recording to bring the count to "000", and then by taking down the contents of the recording together with the corresponding count.

⑯ **CASSETTE HOLDER**
Insert the cassette into the cassette holder directing the side (A or B) you want to record or playback toward you and the tape side downward.

⑰ **POWER SWITCH**
▬ ON ▙ OFF

⑱ **PROGRAM**
During automatic program selection, displays the number of musical pieces to be skipped.

⑲ **REC MUTE (Recording Muting Button)**
By using this button during recording, it is possible to produce a non-recorded portion of the tape as it causes recording signals to be cut off. When the finger is released from the button, the button will automatically be restored to its former condition.

⑳ **▲ EJECT (Eject Button)**
Depressed to open the cover of the cassette holder.

㉑ **● REC (Recording Button)**
Depress this button to make recordings. Keep depressing it until the PLAY button is brought automatically to a depressed state. This button will resist depressing when the cassette tape is not loaded or the tab provided behind the cassette tape has been bent off.

㉒ **◀◀ REW (Rewind Button)**
Functions to effect high-speed tape transport from right to left. To be depressed together with the PLAY button when selecting a musical piece some numbers back by means of the musical program selector system (MPSS).

㉓ **▶ PLAY (Playback Button)**
Press this button for playback.

㉔ **▶▶ FF (Fastforward Button)**
Functions so as to transport tape form left to right at high speed. To be depressed together with PLAY button when selecting a musical piece some numbers ahead by means of the musical program selector system (MPSS).

㉕ **■ STOP (Stop button)**
To stop tape travel, depress this button. When the whole tape has been taken up, the AUTO STOP mechanism will be activated, bringing the set automatically to the STOP mode. Therefore, there is no need in this case to depress this button.

㉖ **II PAUSE (Temporary Stop Button)**
Press this button for temporary stop of the tape running in recording or playback. By pressing the button again, the lock of the button is released and recording or playback is restarted.

㉗ **REC LEVEL (Recording Level Control)**
Used for adjusting the recording level of program sources. (PHONO, TUNER, MIC)

㉘ **TAPE SELECT (Tape Selector Switch)**
Referring to "HOW TO USE TAPE SELECTOR" (P. 15) set this switch to the position that corresponds with the tape in use.

㉙ **DOLBY NR (Dolby Noise Reduction Switch)**
Set this switch to the "IN" position for recording with Dolby NR. In this case, be sure to set this switch to the "IN" position in playback. Similarly, when you record with this switch set to the "OUT" position, play the tape with the same switch setting.

㉚ **MIXING (Mixing Balance Control)**
Rotate clockwise, causes the microphone volume to be increased. And rotate counterclockwise, causes the program source volume to be increased. When rotate fully counterclockwise, permits listening to the program source alone.

㉛ **MIC (Microphone Jack)**

㉜ **SELECTOR (Input Selection Switch)**
Selects the specific program source to be played.
TAPE: When playing a tape with the cassette deck, set switch to this position.
PHONO: When playing a record with the turntable, set switch to this position.

AUX/TUNER: This position is correlated with the AUX/TUNER switch on the rear panel. When listening with the tuner, the AUX/TUNER switch must be positioned to "TUNER". When the AUX/TUNER switch is set to the "AUX" position, you can listen to music played by a unit (external tape deck, for example) connected to the LINE IN terminals.

㉝ **BALANCE (Balance Control)**
This control adjusts the balance between the two channels. The sound image is normally balanced at the center, shifted to the right side when this control is turned to the right, and to the left side when turned to the left. Adjust the control to match the position of the speaker systems and your listening position.

㉞ **VOLUME (Volume Control)**
This control adjusts the sound volume from the speakers, The volume is increased by rotating clockwise, and decreased by rotating counterclockwise.

㉟ **BASS (Bass Control)**
Used for adjusting the tone of the high-frequency range. As bass sounds will be emphazised when this knob is turned counterclockwise, it should be adjusted according to the characteristics of the listening room and to match your taste.

㊱ **TREBLE (Treble Control)**
Used for adjusting the tone of the high-frequency range. Treble sounds will be emphazised when this knob is turned clockwise and attenuated when turned counterclockwise.

㊲ **PHONES (Headphones Jack)**
Output terminal for stereo headphones. Use headphones of the low impedance type (4Ω – 16Ω).

㊳ **SPEAKERS (Speaker Selection Switch)**
This switch controls speaker selection.
- For listening to the speakers connected to the A terminals.
- For listening to the speakers connected to both A and B terminals.

㊴ **SET (MPSS Set Button)**
Used during automatic program selection for setting the number of musical pieces to be skipped. To be depressed a number of times equivalent to that to be skipped.

㊵ **MPSS/FM MODE**
MPSS (Music Program Selection Switch)
For automate program selection during tape play, turn on this switch.

MUTING/MODE (FM)
- on/auto: For receiving a FM stereo broadcast. In this position, the interstation noise is eliminated while tuning.
- off/mono: For receiving a monaural FM broadcast. In this position, the interstation noise is not eliminated while tuning, enabling weaker FM broadcasts to be tuned in. Stereo broadcasts are also received monaurally.

㊶ **PRESET TUNING**
For further details, refer to "PRESETTING" (P. 13).

㊷ **TUNING (Tuning Control)**
Used for selecting FM, MW and LW broadcasting stations. Is interlocked with the dial pointer.

㊸ **PRESET (Preset Buttons)**
When these buttons are depressed, it will cause the frequency that has been set (memorized) in advance into that specific button to be received. The MC-8000 is capable of memorizing frequencies up to six FM broadcasting stations, and allows the desired station to be selected by one push of the button. For further details, refer to "FM PRESETTING" (P. 13).

㊹ **FREQ. METER (Frequency Meter)**
When a PRESET button is depressed, displays the frequency that has been preset with that specific button.

㊺ **▶ STOP (Stop Button)**
Press this button to stop playing a disc record. When this button is kept depressed when the tonearm is at its UP position above the disc record, it will cause the tonearm to be moved toward the outer groove of the disc. When released, the tonearm will stop.

㊻ **▲▼ LIFT/CUE (Arm Lift/Cue Button)**
This is for lifting up the tonearm, or dropping (CUEING) the tonearm.

㊼ **◀ START (Start Button)**
This button is depressed when starting disc play. Pressing this button continuously when the tonearm is placed above the disc surface, the tonearm moves to the inner side of a disc record. When you release its pressing, the tonearm stops instantly. By keeping this button depressed, it is possible to move the stylus to the inner side of the disc instead of lowering it toward the outermost groove of the disc record.

㊽ **REPEAT (Repeat Play Button)**
Depressed when the disc is to be played repeatedly. In this case, the repeat indicator will light up.

㊾ **SPEED (Speed Selection Button)**
This is a button used for selecting the rotational speed by manual operation. The speed is indicated by the speed indicator.

㊿ **CARTRIDGE**
When stylus replacement is necessary, replace with type MAG-47.

(51) **HEAD SHELL**

(52) **FIXING SCREW FOR TRANSPORT**
To be removed before using the MC-8000.

(53) **ARM REST**
When using the set, release the lock.

(54) **TONEARM**
A straight pipe is used.

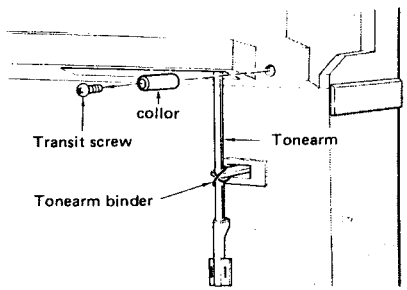
(55) **SELECTOR DISPLAY**
Displays the input program source selected by the SELECTOR.

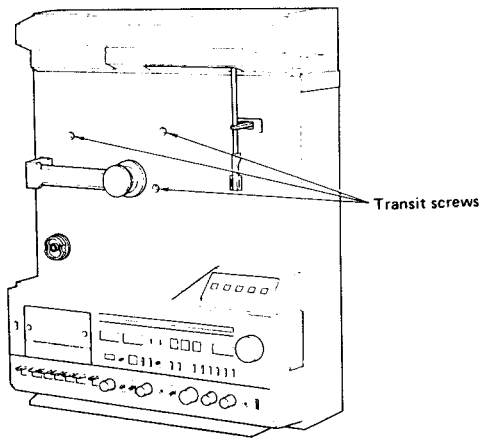
ASSEMBLY AND CONNECTIONS

1. ASSEMBLY AND ADJUSTMENT OF TURNTABLE

1-1 BEFORE ASSEMBLY

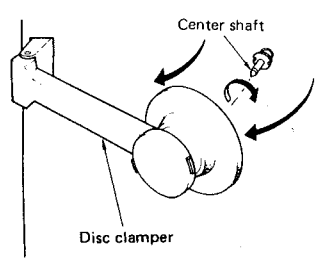
① Remove the fixing screws used for transport.
② Take off the binder used for fixing the tonearm to the arm rest.
● As the fixing screws and binder are needed in the case of re-transport, safekeep them.

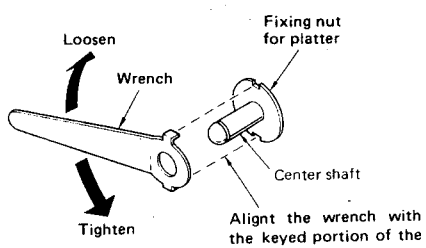


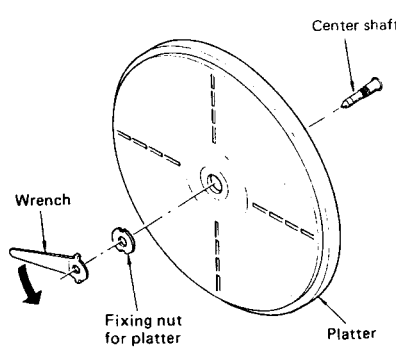


1-2 MOUNTING OF TURNTABLE

① Press the two side tabs of the disc clamper and pull it toward you.
② The center shaft is provided with nut to fix the platter in place. Using the supplied wrench, turn the nut clockwise and take it off. (The center shaft is threaded inversely.)
③ Insert the platter (separately packed) into the center shaft. Frimly secure the platter to the center shaft by turning the fixing nut counterclockwise.
Tighten the nut.
④ Insert the disc clamper into the center shaft. With this, assembly work for turntable section has been completed.

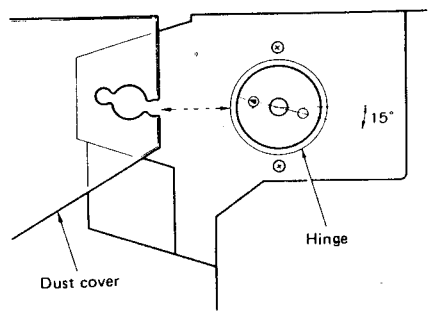


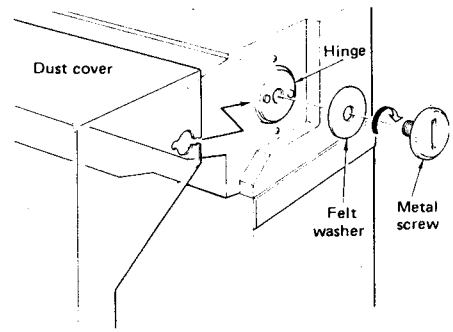




1-3 MOUNTING OF DUST COVER

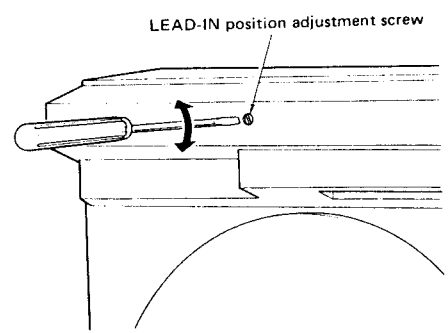
① With the arrow marks on the left-side and right-side hinges on the body facing toward the front, insert the dust cover (separately packed), matching the arrow marks of the grooves with the hinges.
② Apply the supplied felt washer to the metal screw and using a coin, etc., fix the dust cover to the hinges. The metal screw and felt washer are contained in a separate package.





1-4 LEAD-IN POSITION ADJUSTMENT

When the stylus does not drop onto the record at the correct position in automatic play (stylus does not drop onto the record suface, or play starts from midway of a musical number), adjust the lead-in position of the tonearm by using the screwdriver to turn the lead-in position adjustment screw.
① Place 30 cm (12 in.) record on the platter.
② Press the start button (◀) to play the record and check the lead-in position.
③ Turn the lead-in position adjustment screw either clockwise to move the lead-in position toward the outside or counterclockwise to move the lead-in position toward the inside and then press the stop button (▶).



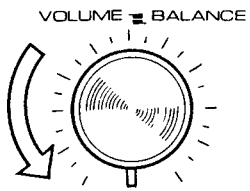
2. CONNECTIONS

(Please see fig. 4)

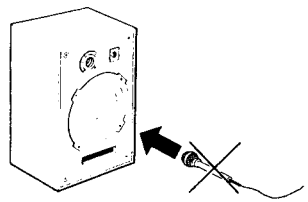
Connect the speakers and antennas as shown in the illustrations.

OPERATIONS

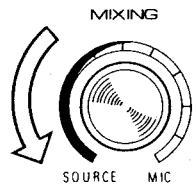
BEFORE OPERATING



Be sure to turn the VOLUME control fully counterclockwise (↺) when the POWER switch is turned on or off, or when connections to the front or rear panels are made.

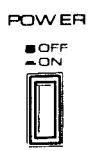


MIC MIXING
If the microphone is placed near the speaker with the volume high, feedback howling can occur. Reducing the volume level or moving the microphone will eliminate the feedback.

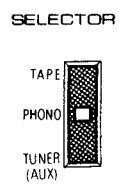


Set the MIXING control to the SOURCE position for normal playback of all sources.

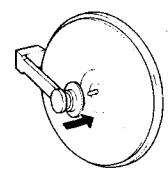
PLAYING DISCS



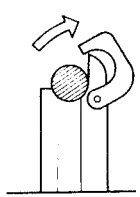
Depress the POWER switch.



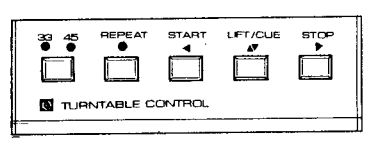
Set the SELECTOR switch to the PHONO position. This will cause the PHONO symbol to illuminate on the selector display.



Place the record onto the platter and hold it with the disc clamper.

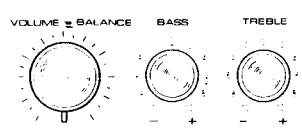


Release the arm lock. With this, the platter is given freedom, bringing the set to a condition ready for play.



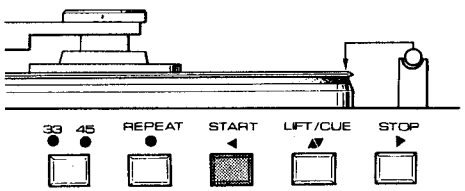
Operate the turntable. As turntable operation will be described in details in the next section, it is omitted here.

- This set can automatically play 17 cm and 30 cm records specified RIAA.



Adjust the volume with VOLUME control and the tone with the BASS and TREBLE controls to match your taste.

TO START PLAY

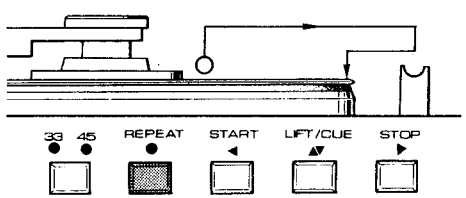


Press the start button (◀). The button may be released after pressing as the circuit will be engaged immediately. The platter will begin to turn the proper speed to suit the type of record on the platter. The tonearm will quietly start to lift and then move horizontally toward the inside. When it reaches the outer groove of the record, it will stop and quietly lower on the record to commance playing the music.

- To Play 25 cm (10 in.) Record

1. Keep the start button (◀) depressed until the tonearm reaches the LEAD-IN groove on the record surface. Then release the START button.
2. Depress the lift/cue button (▼▲) to lower the tonearm down to the record surface.

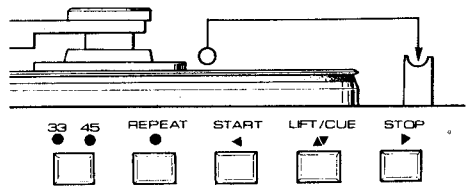
REPEAT PLAY



Press the repeat button to hear the same record repeatedly. The repeat indicator will light and the playing is finished, the tonearm will lift, move out to the above of the arm rest, return to the outer groove of the record and lower to play from the beginning again. Play will continue to be repeated as long as the repeat indicator is lighted. To cancal play repeat, press the repeat button again. Play-repeat will also be cancelled when play is stopped by pressing the button (▶).

- Do not effect REPEAT play for 25 cm records.

END OF PLAY



When the play is over, the tonearm quietly lifts and returns to the arm rest and the platter stops its rotation.

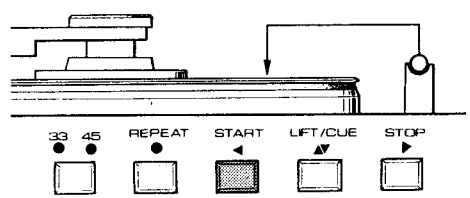
- Records which cannot be played on auto

The following records cannot be played in the regular automatic mode.

- Transparent records
- Badly warped records
- Colored records (red, green or yellow)
- Records not conforming to RIAA standard.

When you play a transparent record or a colored record, place the black sheet (supplied with this unit) between the record and the platter.

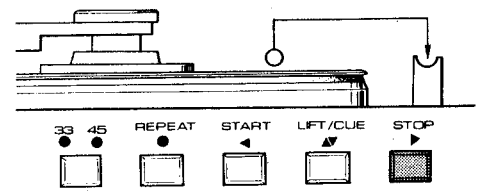
TO START PLAY IN THE MIDDLE OF A DISC



To begin listening at a particular spot on the record instead of starting at the begining, follows these steps:

1 Press the start button (◀) and continue to press. The tonearm will lift and move toward the middle of the record. The tonearm will move as its normal speed until it gets to the outer groove of the record and then it will slow down. Release the start button (◀) when the stylus reaches the desired place on the record and the tonearm stops its movement immediately. When the tonearm is going ahead from the desired spot, release the start button (◀) and press the stop button (▶). The tonearm goes back at a lower speed while pressing the stop button (▶).

STOP

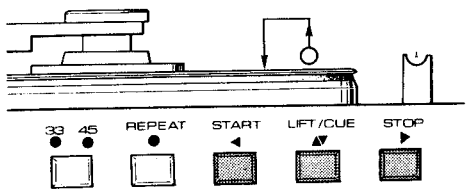


Depress the stop button (▶).
To stop play med-way through a record, press the stop button (▶).
The tonearm will return to the arm rest and the platter will stop its rotation.

2 Press the lift/cue (▲▼) and the tonearm will lower itself quietly onto the record surface and play will start.

How to Use Disc Gauges
Record play can be started at the desired position from the middle of the record by reading the disc clamper's gauge that corresponds to the particular location on the record first, and then lowering the stylus at the point where gauge of the panel on the upper side of the turntable with the center of the tonearm.

LIFT AND CUE



When the lift/cue button (▲▼) is pressed, the tonearm will be either lifted up or will drop (cueing). When you wish to listen to another musical number, this is possible by depressing the lift/cue button (▲▼) to lift up the arm, then depressing the stop button (▶), or start button (◀) to move the arm to the desired position, and pushing the lift/cue button (▲▼) to drop it.

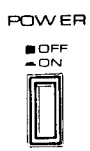
● Selection of Rotational Speed

This turntable automatically changes its speed as follows to suit the record size being played.

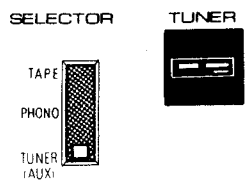
30 cm (12 in.) Record . . . . . 33 RPM
17 cm (7 in.) Record . . . . . 45 RPM

When the speed is supposed to be different from the above or when you play the record whose size is different from the above, press the speed reset button to change the speed.

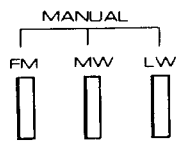
LISTENING TO FM, MW, LW BROADCAST (MANUAL TUNING)



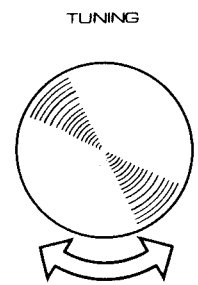
Push the POWER switch to the ON position.



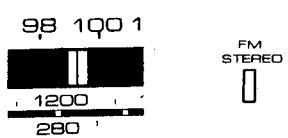
Set the SELECTOR switch to the TUNER position. This will cause the TUNER symbol to illuminate on the selector display.



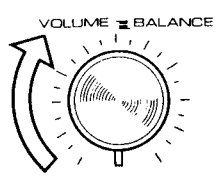
Using the MANUAL button, select the FM, MW or LW broadcast.



Set it to the desired station.



When proper tuning is attained for that particular broadcasting station, the center of the dial pointer will grow in red more intensively is the optimum tuning point. When an FM stereo broadcast is being received, "FM STEREO" indicator will be illuminated.

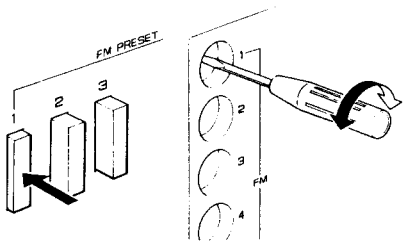


Select the desired volume level with the VOLUME control. The volume of the left-side and right-side speakers can be adjusted by means of the BALANCE control located inward of the VOLUME control.

FM PRESETTING

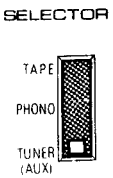
The MC-8000 is capable of presetting six FM stations.
Presetting is performed in the following manner.

1. Depress PRESET button 1, and while monitoring an actual broadcast, either through speakers or through headphones, turn the PRESET TUNING 1 screw using the supplied screwdriver to obtain proper tuning. (When the screw is turned, the pointer of the frequency meter will indicate that particular frequency.)
2. Similar to 1, set PRESET button 2, by adjusting PRESET TUNING screw.
3. Preset all the six FM stations following the above procedures.
4. When you wish to change presetting, this can be accomplished by following the ordinary presetting procedures.
5. When not in use, the screwdriver for preset tuning should be kept in the holder provided on the right side surface toward the back of the body.

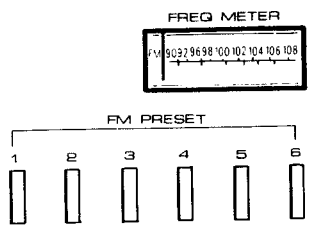


LISTENING TO FM BROADCAST (PRESET TUNING)

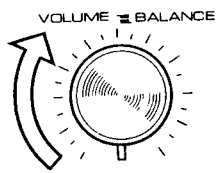
Push the POWER switch to the ON position.



Set the SELECTOR to the TUNER position.

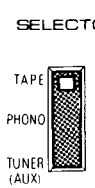


Select the desired FM station. The frequency that has been preset in the frequency meter will be displayed.

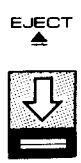


Select the desired volume with the VOLUME control.

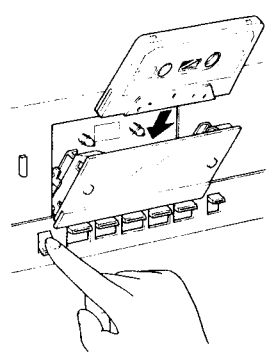
TAPE DECK PLAYBACK



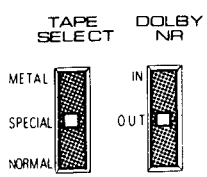
Set the SELECTOR switch to the TAPE position. This will cause the TAPE symbol to illuminate on the selector display.



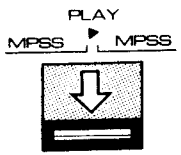
Press the EJECT button down to open the cassete holder.



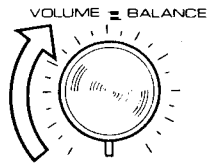
Then insert the casette tape directing the side (A or B) you want to hear toward you and tape side downward.



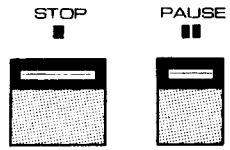
Set the DOLBY NR switch so as to match the tape to be played. That is, set it to the IN condition for tapes recorded with the DOLBY NR system, and to the OUT condition for tapes recorded without it.
Set the TAPE SELECT switch to match the tape being used. (Refer to attached list)



Play will start the PLAY button is depressed.

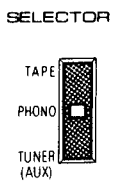


Select the desired volume with the VOLUME control.

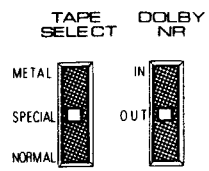


Depress the STOP button to stop play.
The PAUSE button is to be depressed when you wish to suspend play. To restart play, depress this button again.

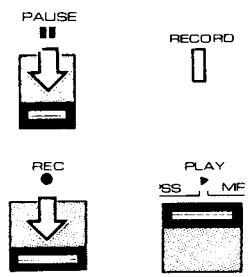
TAPE DECK RECORDING



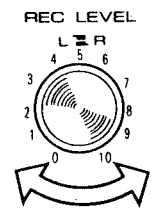
Set the SELECTOR switch according to the source to be record ie., PHONO, TUNER etc.



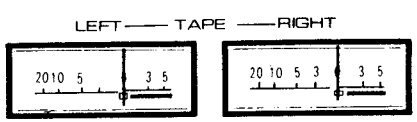
Set the TAPE SELECT switch so as to match the tape in use. The DOLBY NR switch is to be set in the IN condition, and OUT for ordinary recordings.



After depressing the PAUSE button and locking it, depress the REC button and keep depressing it until the PLAY button is brought automatically to a depressed state. This will cause the REC indicator to light up.
(RECORD STAND BY)

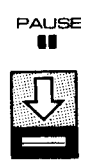


Adjust the recording level by means of the REC LEVEL controls. The upper control handles the left (L) and lower control handles the (R) channel.

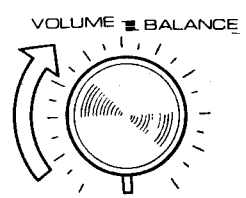


Adjust the recording level while viewing the level meters so that the needles of the meters swing around "OVU" at the highest level of the program source.

Adjust of the Program Source Now, the unit is ready for record.
Start the recording source.



When the lock is released by depressing the PAUSE button again, recording will start. To temporarily suspended record, depress the PAUSE button again.



When you wish to hear the sounds during recording, rotate the VOLUME control clockwise and adjust the volume to the optimum level.

HOW TO USE TAPE SELECTOR

To bring out the tape's characteristics to their fully potential to ensure low distorsion record and play, the TAPE SELECT switch should be set as shown in the list.

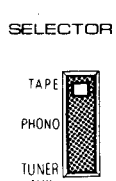
Type of Tape		METAL SPECIAL / NORMAL Fe-Cr	METAL SPECIAL
Manu-facturer	**Type**		
TDK	D, AD, OD	NORMAL	
	SA	METAL SPECIAL	SPECIAL
	MA-R	METAL SPECIAL	METAL
MAXELL	UL, UD, XLI	NORMAL	
	XLII	METAL SPECIAL	SPECIAL
	MX	METAL SPECIAL	METAL
SONY	BHF, AHF	NORMAL	
	JHF	METAL SPECIAL	SPECIAL
	DUAD	Fe-Cr	
	METALLIC	METAL SPECIAL	METAL
FUJI	RANGE-2,4,6, DR, ER	NORMAL	
	RANGE-4X, UR	METAL SPECIAL	SPECIAL
	SUPER RANGE, SR	METAL SPECIAL	METAL
SCOTCH	LH, CRYSTAL, MASTER	NORMAL	
	CLASSIC	Fe-Cr	
	METAFINE	METAL SPECIAL	METAL
BASF	LH, LN, SUPER LHI	NORMAL	
	FCR	Fe-Cr	

HOW TO DUB TAPES

Tape dubbing (copying) is possible by connecting another tape deck to the IN and OUT terminal of the MC-8000's rear panel.

Dubbing from this tape deck (A) to another (B).

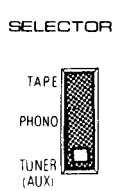
1. Connect the LINE OUT (L and R) terminals on the rear panel to the INPUT (L and R) terminals of tape deck B.
2. Dubbing can be carried out by putting the tape deck A in the "PLAY" mode and the tape deck B in the "RECORD" mode, with the SELECTOR positioned to TAPE.

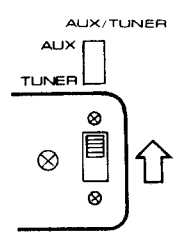


Dubbing from tape deck (B) to tape deck (A).

1. Connect the AUX IN (L and R) terminals on the rear panel of the MC-8000 to the OUTPUT (L and R) terminals of the tape deck B.
2. Set the AUX/TUNER switch on the front panel to the AUX position.
3. Set the SELECTOR switch on the front panel to TUNER position.
4. Dubbing from the tape deck B to the tape deck A is possible by putting the tape deck B in the "PLAY" mode and the tape deck A in the "RECORD" mode.

- Be carefull not to put both tape deck A and B into the "PLAY" mode, as this will cause oscillation.





RECORDING FORM MICROPHONE

Microphone recordings can be made by inserting the plug of the microphone (separately sold) into the MIC jack and then putting the tape deck into the REC mode.

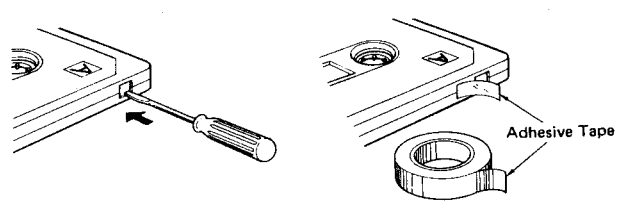
- If the sounds from the microphone alone are to be recorded, the MIXING knob is to be turned fully clockwise (to MIC position).
- When the MIXING knob is turned counterclockwise, you can make mixed recordings with various program sources. (For further details, refer to P. 18).
- Microphone recordings will be "monaural".
- Recordings made from discs or music tapes are prohibited by the Copyright Law for use other than for personal enjoyment.

ERASING

When new recordings are made on as already recorded tape, the previous recording will be automatically erased. When you wish to erase the recording without making any new one, this is achieved by turning down the RECORD LEVEL controls to the minimum position, and putting the unit in the "RECORD" mode (depress the REC button, and keep depressing it until the PLAY button is brought automatically to a depressed state.) This will cause erasing to start. At this time, the TAPE SELECT switch should be set so as to match the tape that is being erased.

ERASE PROTECTION

The cassette incorporates a convenient erase-protection device to prevent accidental erasure. When the tabs at the rear of cassette are broken out, the REC button can not be depressed and the erase protection device will be activated to prevent accidental erasure of pre-recorded tape.
If you want to record on the track for which the tabs have been already broken out, cover the hole with celophane or vinyl adhesive tape.



HOW TO USE MPSS

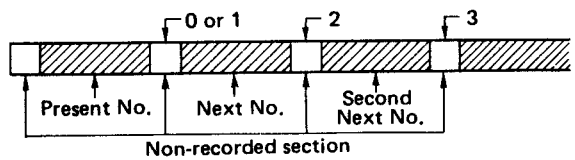
When playing a commercially-available music tape,if you wish to play a number that is some numbers ahead of the one you are listening to now, this can be automatically achieved by using the MPSS (Music Program Selector System).

1. Push up the MPSS and turn it on.
2. Depress the SET button for a number of times equivalent to the number of pieces you wish to skip. Refor to "SETTING OF PROGRAM SELECTION".
3. The number of the program selected will be displayed on the PROGRAM display section.
4. If you had made a mistake in setting, keep on depressing the SET button until the display rads "0", and then perform setting operations over again.
5. If you wish to select a number that is located after the number you are listening to, this can be achieved by depressing the FF button together with the PLAY button.
6. In the case you wish to select a number that is located before the one you are listening to, depress the REW button together with the PLAY button. When the tape is taken up as far as the desired position, the lock on the FF (or REW) button will be automatically released, causing PLAY to start.

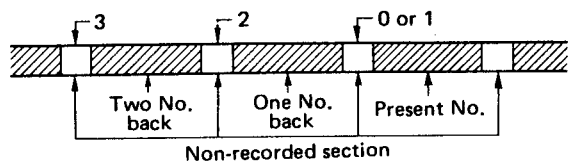
SETTING OF PROGRAM SELECTION

Since the MPSS functions by detecting the non-recorded sections between the numbers, setting is performed in the following manner.

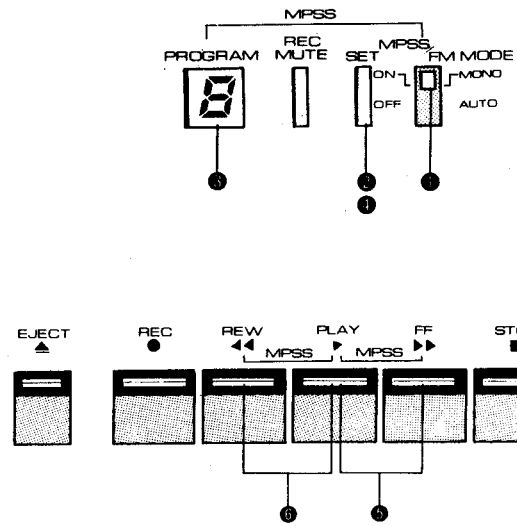
Ex. When selecting next number . . . . . 0 or 1
Program selection setting . . . . . .



Ex. When selecting a number one back 2
Program selection setting . . . . . .



For the rest, add "1" have the same function. "0" and "1" have the same function. When you wish to listen to the next program, or want to listen to the one you are now listening to over again, there is no need to depress the SET button.



TAPES THAT NOT PERMIT PROGRAM SELECTION

In order to have the MPSS function, it is necessary that non-recorded sections lasting no less than 5 seconds each exist between the numbers. Therefore, accurate program selection is not possible with the following tapes.

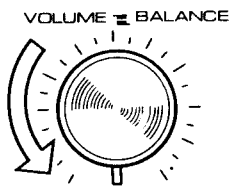
- Tapes whose non-recorded sections are too short.
- Tapes with noise recorded in the non-recorded sections.
- Tapes containing recording of numbers having long pause intervals.
- Tapes containing numbers having parts that were recorded at very low levels.
- Tapes such as those containing recordings of conversations where the voice is intermittent.

RECORDING TO ENABLE PROGRAM SELECTION

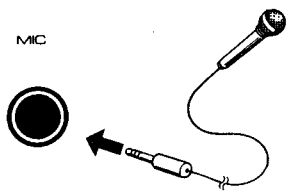
To have the MPSS function properly for tapes containing recordings of music from FM broadcast, etc., it is necessary, as with music tapes, to provide non-recorded sections lasting not less than 5 seconds between the numbers.
In this case, it will be convenient to use the REC MUTE switch.

1. On completion of the number, depress the REC MUTE switch.
2. Keep the REC MUTE switch depressed for about 5 seconds, and then with the switch in the depressed condition, depress the PAUSE button.
3. When the set has been switched to the PAUSE mode and tape travel has been suspended, release your finger from the REC MUTE switch.
4. Depress the PAUSE button again to start recording of the next number.

SINGING WITH A CONVENTIONAL MICROPHONE



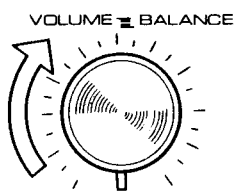
Rotate the VOLUME control fully counter-clockwise to minimum.



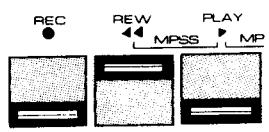
Insert the plug of the microphone into the MIC jack.

Set the MIXING control to the MIC position.

Switch on the microphone's switch.

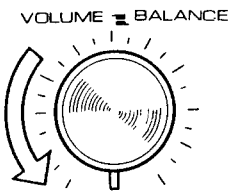


Select the desired volume with the VOLUME control.

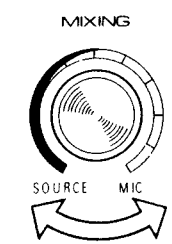


Recording of sounds from the microphone is possible by putting the tape deck into the "RECORD" mode in this condition.

MIXING DISC OR TAPE PLAYBACK WITH THE MICROPHONE



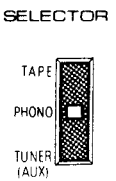
Rotate the VOLUME control fully counter-clockwise to minimum.



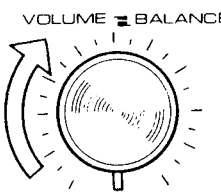
Rotate the MIXING control to the center position.

Adjust the mixing level so as to match your taste.

WHEN USING ACCOMPANYING RECORD

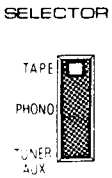


In the case an accompanying record is used, set the SELECTOR switch to the PHONO position.

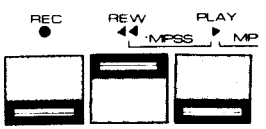


Select the desired volume with the VOLUME control.

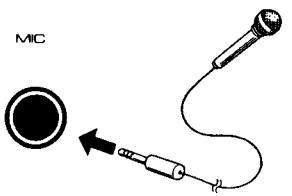
WHEN USING ACCOMPANYING TAPE



In the case an accompanying tape is used, set the SELECTOR switch to the TAPE position.



Recording of mixed sounds (when using accompanying record) is possible by putting the tape deck into the "RECORD" mode in this condition.



Insert the plug of the (conventional) microphone to MIC jack.

Switch on the (conventional) microphone.

BEFORE TAKING YOUR MUSIC CENTER IN FOR SERVICING . . .

First check to ensure that all components are properly connected and operating normally. Then check the following:

GENERAL SYMPTOMS

SYMPTOM	CAUSE	REMEDY
● Power does not come on when the POWER switch in on.	● Power cord not completely plugged in. ● Fuse has blown.	● Plug in completely. ● Cosult your authorized service dealer.
● No sounds in both channels.	● SELECTOR switch is incorrectly set. ● Speaker leads not completely plugged in. ● Pin plugs not completely pugged in.	● Correct switch position. (Confirm with indicator). ● Plug in completely. ● Insert them completely.
● No sound in one side only.	● Speaker leads not completely plugged in. ● Pin plugs not completely plugged in. ● The BALANCE control is rotated to one side.	● Plug in completely. ● Insert them completely. ● Restore the stereo balance with the BALANCE control.
● No sound for three to five seconds after the power switch is turned on.	● This is not malfunction. It is due to the fact that a muting circuit is operating to eliminate the popping noise when power is turned on.	
● No stereo effect and poor bass.	● Speaker (+) and (−) are reversed.	● Correct the speaker leads connection.

SYMPTOMS IN MW, LW BROADCASTS

SYMPTOM	CAUSE	REMEDY
● Poor sound quality.	● Weak signal strength.	● Stretch out the supplied lead antenna, or install on outdoor antenna.
● Humming noise in the back ground.	● This is due to the direction in which the power plug was plugged in. ● Due to other electric appliances on the same power circuit. ● Due to location and stations.	● Reverse the power plug. ● Remove such electric appliances as heater an others. ● It is difficult to eliminate noise when the cause is due to locations and stations. Consult your authorized service dealer.
● Beating noise (louder at night)	● Due to interference between stations. ● Due to interference of TV.	● Though it is difficult to eliminate it, shift tuning slightly. ● Turn off the TV.
● Although no broadcast is being received, dial pointer glows more intensively in red.	● Receiving noise signals.	● Change the direction of the set, or install an external leads antenna.

SYMPTOMS IN FM BROADCASTS

SYMPTOM	CAUSE	REMEDY
● Scratching noise.	● Auto ignition noise. (It is difficult to correct without eliminating the source of noise.)	● Change the direction of the antenna. Put it as fas as possible from the road. Substitute coaxial cable for 300 ohms flat twin lead.
● Hissing noise.	● Noise from electrical appliance. (fluorescent lights, TV, motors, etc.)	● Install outdoor FM antenna and attach a good ground.

SYMPTOMS IN RECORD PLAY ONLY

SYMPTOM	CAUSE	REMEDY
● Reproduced sound is rough or, treble sound is not clear.	● Worn-out stylus. ● Damaged record. ● Dirt is deposited on stylus tip. ● Improper stylus attachment. ● Improper tracking force.	● Replace the stylus. ● Replace the record. ● Clean the stylus tip. ● Attack the stylus property. ● Set the tracking force correctly.
● Howling occurs.	● Sound vibration from the speakers are transmitted back to the tonearm and cartridge.	● Separate this unit from the speakers as far as possible or change their directions.
● No sound.	● Stylus cover is provided.	● Remove the stylus cover.
● Volume level difference between turner and records.	● Signal strength and recording levels are different.	● It is not always to remedy this completely.
● Stylus skipping.	● Worn-out stylus. ● Dirt is deposited on stylus tip. ● Poor record (scratched, damaged, etc.) ● Warped record. ● Dirty record.	● Replace the stylus. ● Clean the stylus tip. ● Replace with a new one. ● Replace with a new one. ● Clean with a commercially available disc cleaner.
● Stylus fails to drop properly on record surface.	● Correct perpendicularity not obtained.	● Obtain correct perpendicularity.

SYMPTOMS IN TAPE PLAY ONLY

SYMPTOMS	CAUSE	REMEDY
● REC (Record) button cannot be depressed.	● No cassette inserted. ● Tabs of cassette broken.	● Place the cassette in the cassette holder. ● Cover the hole with cellophane tape, etc.
● PLAY button is released instantly after being depressed.	● Tape is completely wound on the right reel.	● Rewind tape. ● Turn over or change the cassette.
● Tape does not run.	● PAUSE button is locked.	● Depress PAUSE button to release its locking.
● Cannot record.	● Heads dirty.	● Clean heads.
● Distorted sound recording.	● Heads dirty. ● Excessively high recording level.	● Clean heads. ● Adjust the recording level adequately.
● Bad SN ratio in recorded sound (High noise level).	● Heads magnetized.	● Clean heads.
● Cannot playback.	● Heads dirty. ● Improper setting of SELECTOR switch.	● Clean heads. ● Re-set the SELECTOR switch properly.
● Small sound volume.	● Excessively low recording level. ● Heads dirty.	● Adjust the recording level adequately. ● Clean heads.
● Poor sound quality.	● DOLBY NR switch incorrectly switched. ● TAPE SELECT switch incorrectly switched. ● Heads dirty. ● Excessively high recording level.	● Set DOLBY NR switch correctly. ● Set TAPE SELECT switch correctly. ● Clean heads. ● Adjust the recording level adequately.
● Failure to erase previous recording.	● Erase head dirty. ● TAPE SELECT switch incorrectly switched.	● Clean head. ● Set TAPE SELECT switch correctly.